Coordinate your GPS system with Topo50

Land Information New Zealand (LINZ) will be launching a new 1:50,000 topographic map series later this year called Topo50.

From September 2009, the entire Topo50 map series will be available from map retailers. Topo50 will replace LINZ's existing 1:50,000 scale NZMS260 series while still providing the same representation at 1:50,000 scale.

A new datum, New Zealand Geodetic Datum 2000 (NZGD2000), and map projection, New Zealand Transverse Mercator 2000 (NZTM2000), are being used for the Topo50 maps. This means that the latitude, longitude, and grid coordinates (known as eastings and northings) will be different from those on the current NZMS260 maps.

NZGD2000 corresponds to the datum used in modern navigational systems, such as the Global Positioning System (GPS). Transverse Mercator is a projection that is commonly used internationally.

EMERGENCY SERVICES SHIFTING TO NZTM2000 AND TOPO50 MAPS

It is important that your GPS unit fits with the new datum and projection to ensure consistency with the emergency services and defence agencies. These agencies will begin using NZTM2000 and the new Topo50 maps for their emergency and base mapping from the time of the map series' launch in September 2009.

LINZ will also be encouraging map users to purchase Topo50 printed maps that use the NZTM2000 projection.

A GPS unit being used in tandem with a Topo50 map.

GPS SYSTEM USERS

SETTING THE DATUM, NZGD2000, ON YOUR GPS UNIT

For those currently using GPS systems, you can set your GPS receiver to NZGD2000, the datum used by Topo50 to determine latitudes and longitudes.

If your GPS does not support NZGD2000, it will still be able to support Topo50. You can simply set your GPS receiver to the default datum setting of World Geodetic System 1984 (WGS84).

WGS84 is the datum the GPS system uses and for all practical purposes it is the same as NZGD2000. This means that latitudes and longitudes from your GPS receiver will be compatible with those shown on Topo50 maps.

SETTING THE PROJECTION, NZTM2000, ON YOUR GPS UNIT

To get Topo50 grid coordinates (eastings and northings), check that your GPS unit supports the projection used for Topo50 maps, NZTM2000. You can either select the appropriate menu option in your GPS unit or consult the user manual.

If your GPS does not support NZTM2000, the receiver may have the capability to input a user defined projection. Many GPS receivers have this capability. You may need to consult the user manual on how to access this feature.

You will need to set up your receiver with the following NZTM2000 parameters:

Projection	Transverse Mercator
Origin Latitude	0.0 degrees South
Origin Longitude	173.0 degrees East
False Northing	10,000,000 m North
False Easting	1,600,000 m East
Central Meridian scale factor	0.9996

Note that this projection is the same as a Universal Transverse Mercator (UTM) but with a different origin latitude, and different false northing and easting.

MORE TECHNICAL GPS INFORMATION

For more technical GPS information please contact your GPS retailer or manufacturer.

MORE ON THE TOPO50 MAP SERIES

For more information, check out www.linz.govt.nz/topo50.

To register for regular email updates on the Topo50 map series, email newmapseries@linz.govt.nz.

May 2009